TALK A PHONE
Creating Communications Solutions

VOIP-RF-900 Installation Instructions

I. Introduction

Talk-A-Phone's 900Mhz radios are shipped as matched pairs and require no programming or dipswitch adjustments. The output is IP, which requires a Talk-A-Phone **VOIP-1** (or equivalent) to communicate with a Talk-A-Phone Emergency Phone.

NOTE: The **VOIP-RF-900** ship as matched pairs that are hard linked. Please do not mix paired units since a mismatched pair will NOT work as expected.

II. Contents

Before beginning installation, make sure you have all the included components. The **VOIP-RF-900** includes:

2 Radio Modules in outdoor enclosures
2 Power Over Ethernet (PoE) injectors
2 Power supplies (or power cords with battery terminals for solar or battery-powered installations)
2 11dBi antenna
2 Pole Mounting kits

III. Communication Installation

For 120V applications, connect the VOIP-RF-900 as shown in the diagram. For low voltage applications (including solar/battery powered systems), the **VOIP-RF-900** will accept 6-48VDC using the PoE injector.

IV. Mounting

The radio modules have holes and the antennas include brackets for wall mounting. For mounting on a pole, use the included pole mounting kits and see the separate Pole Mount Directions.

ETP-MT/R OP SOLAR Solar Tower:

When mounting on the mast of a solar tower, make sure the solar panels are mounted as high on the pole as possible to avoid interference with the antenna. Attach the assembled bracket with antenna and radio to the pole. Feed the ethernet cable through the antenna mounting hole. You will need to remove the "C" nut from the fitting to feed the cable assembly through the mast, then re-attach it by slipping the cable through and tightening the nut onto the bottom of the fitting.

ETP-SMW Wireless Surface Mount Housing:

When mounting using the ETP-SMW, mount the radio and antenna on the wall or pole above the ETP-SMW. Use the top knockout with a water-tight conduit fitting to ensure a protected environment for the electronics.

ETP-BOX/PCS (or other NEMA 3R housing):

You may use either the conduit holes on the bottom to run the antenna cable out, or, if desired, drill a 1/2" diameter hole to use the included water-tight fitting as described above in the Solar Tower instructions.

All prices and specifications are subject to change without notice.

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V. Manual Frequency Selection

To restrict the operation of the VOIP-RF-900 to a specific channel or center frequency, you may wish to select a specific channel by setting DIP switches 5 to 8 on the “master” radio as shown in the table below (set DIP #2 and DIP #3 to the OFF position). In order to gain access to the DIP switches you will need to open the NEMA box cover on the “master” radio.

Table 1. VOIP-RF-900 DIP Switch Settings.

Channel	DIP #5 Setting	DIP #6 Setting	DIP #7 Setting	DIP #8 Setting	Center Frequency
1	ON	OFF	OFF	OFF	903.12500 MHz
2	OFF	ON	OFF	OFF	905.20833 MHz
3	ON	ON	OFF	OFF	907.29167 MHz
4	OFF	OFF	ON	OFF	909.37500 MHz
5	ON	OFF	ON	OFF	911.45833 MHz
6	OFF	ON	ON	OFF	913.54167 MHz
7	ON	ON	ON	OFF	915.62500 MHz
8	OFF	OFF	OFF	ON	917.70833 MHz
9	ON	OFF	OFF	ON	919.79167 MHz
10	OFF	ON	OFF	ON	921.87500 MHz
11	ON	ON	OFF	ON	923.95833 MHz
12	OFF	OFF	ON	ON	926.04167 MHz

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VI. LED Display Legend

The “master” radio has an array of LEDs that provide various status indicators. ***Table 2*** provides a legend or key for these various indicators. In order to gain access to the LED array, you will need to open the NEMA box cover on the “master” radio.

Table 2. VOIP-RF-900 LED Display Legend.

Name	Function	Color
Power	Unit has power and has successfully booted	**RED**
RF Link	The radio has successfully synchronized with its matched partner radio	**GREEN**
RF TX	Radio transmission is occurring	**GREEN**
RF RX	Radio reception is occurring	**GREEN**
Eth Link	The Ethernet port has a valid Ethernet connection	**GREEN**
Activity	The VOIP-RF-900 is processing data	**GREEN**
1 (channel) 2 (channel) 4 (channel) 8 (channel)	Adding the numbers that are lit will determine the current radio channel. 1 = 903.12500 MHz 2 = 905.20833 MHz 3 = 907.29167 MHz 4 = 909.37500 MHz 5 = 911.45833 MHz 6 = 913.54167 MHz 7 = 915.62500 MHz 8 = 917.70833 MHz 9 = 919.79167 MHz 10 = 921.87500 MHz 11 = 923.95833 MHz 12 = 926.04167 Mhz	**GREEN**
Link Quality Meter (the more LEDs that are lit, the higher the link quality)	Excellent link quality – no retransmissions	**GREEN**
	Very good link quality – few retransmissions	**GREEN**
	Good link quality – occasional retransmissions	**YELLOW**
	Fair link quality – some retransmissions	**YELLOW**
	Poor link quality – many retransmissions	**RED**
	No link quality – no link available	**RED**

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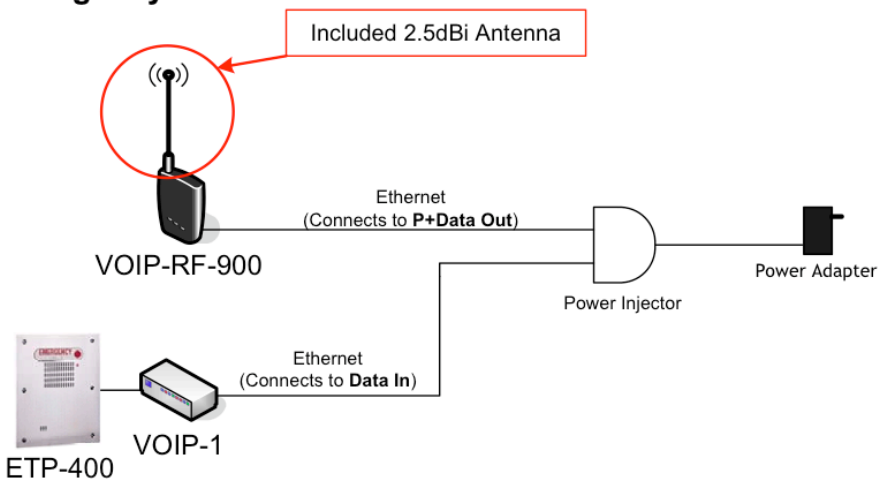
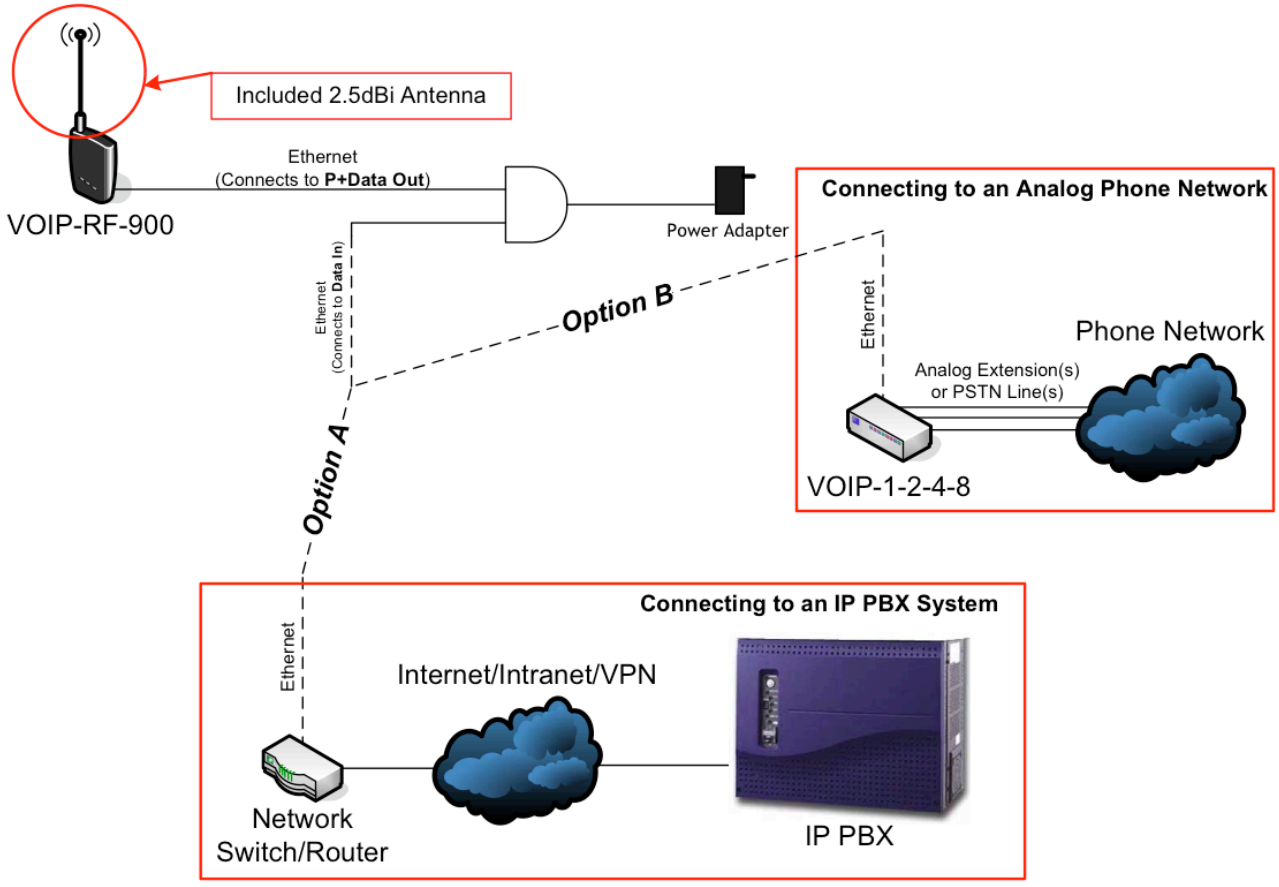
VOIP-RF-900 Connectivity

Connecting to Emergency Phones



Connecting to Head End



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All prices and specifications are subject to change without notice.